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"e-MoTion in Spinal Pain"

POSTER ABSTRACT SUBMISSION

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AN EXPLORATION OF FAMILIAL ASSOCIATIONS IN PAIN-RELATED POSTURAL AND MOVEMENT PATTERNS IN FAMILIES WITH CHRONIC DISABLING LOW BACK PAIN

Background and aims: Altered postural and movement patterns with pain have been demonstrated in children, adolescents and adults with chronic disabling low back pain (CDLBP). The use of a classification system based on the direction of pain-provocation allows identification of different subgroups, including active extension and multidirectional pain-related patterns, which are representative of people with CDLBP. While familial associations have been identified for certain spinal postures in standing; and posture and movement are associated with each other, it is unknown whether a familial relationship might exist between pain-related postural and movement patterns in families with CDLBP. This study explored whether familial associations in pain-related postural and movement patterns existed within and between members of families with CDLBP.

Design: Cross-sectional, community-based cohort study.

Methods: 33 parents and 28 children from 26 families with CDLBP were classified into subgroups by musculoskeletal physiotherapists based on clinical analysis of video footage of functional postures and movements (Fig. 1), combined with aggravating factors taken from the Oswestry Disability Questionnaire. The presence and strength of a relationship between a parent's and a child's postural and movement subgroup was investigated with the use of Fisher's exact test.

Results: The majority of parents were classified as active extension, sons predominately were multidirectional and daughters were evenly distributed between active extension and multi directional. No significant association was found when comparing subgroups in parent-child relationships.

Conclusions: While some parents and their children presented with a remarkable likeness in the way they postured and moved, others did not (Fig. 2). Children's pain-related postural and movement patterns cannot be explained by their parents' pain-related postural and movement patterns alone.

Fig. 1. Snapshots of video footage representing 2 subjects performing a set of standardised postures and movements.
A. Represents a mother with aggravating factors being standing, sitting and lifting, classified into Active Extension subgroup due to the lumbar lordosis maintained in extension in standing, sitting and bending. B. Represents a son with aggravating factors being standing, sitting and lifting, classified as Multi Directional due to lumbar extension during standing, slumped sitting and primarily lumbar flexion during bending.

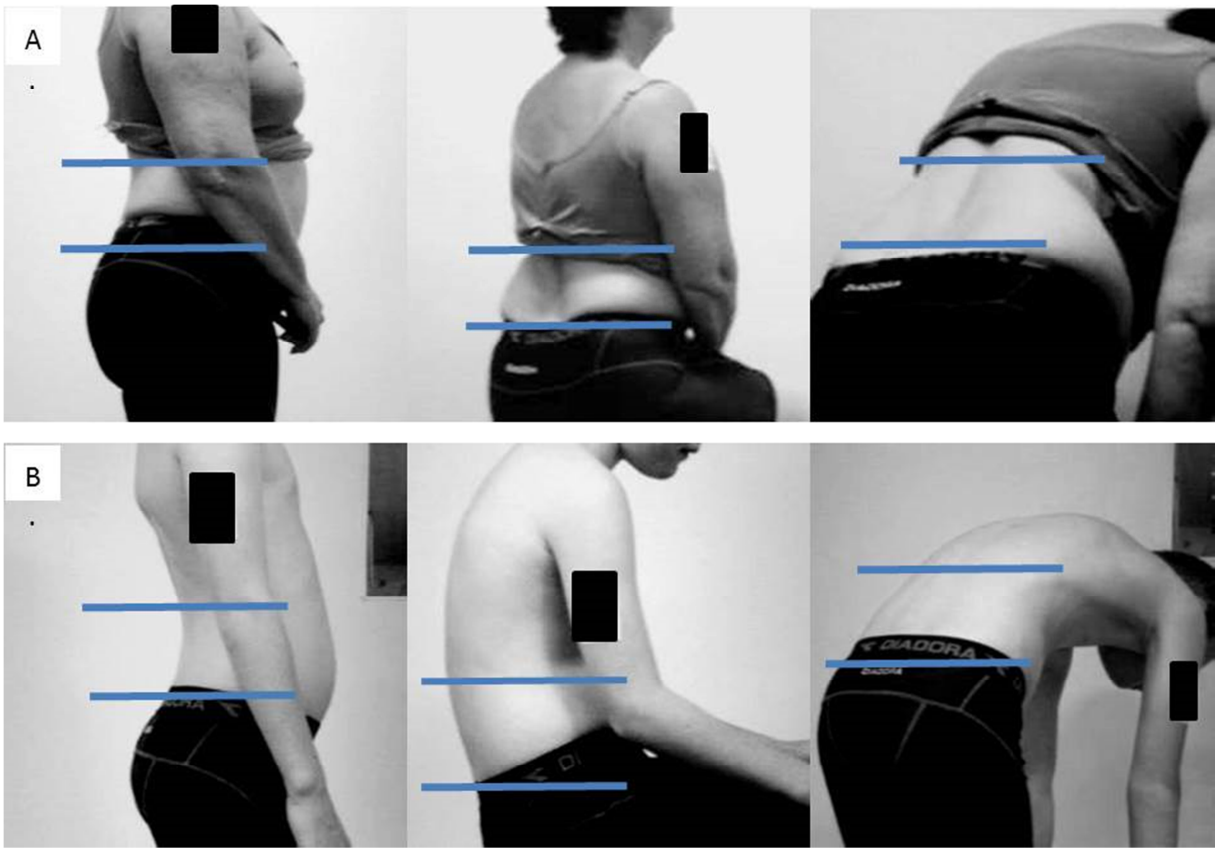

Fig. 1.

Fig. 2. Snapshots of video footage representing two families in sitting and squatting. A. Represents a parent-child dyad from one family displaying the same subgroup classified as Multi Directional. B. Represents a parent-child dyad from one family displaying different subgroups with the father classified as Active Extension and the son classified as Multi Directional.

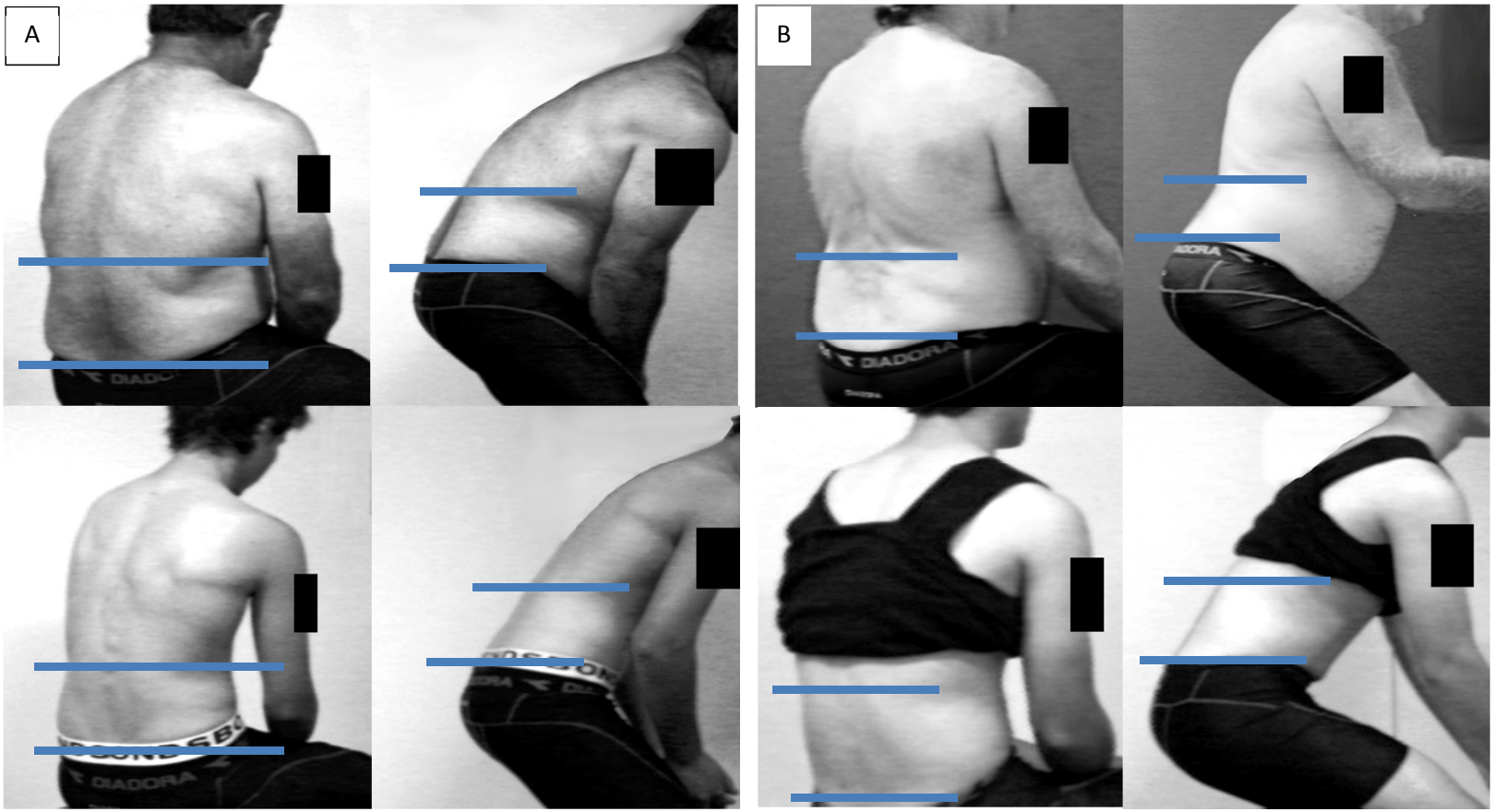

Fig. 2.